Management of Small Docks and Piers

Impacts to Navigation and Public Access

Introduction—

Even the smallest of private docks, extending out into a waterway, has the potential to affect navigation, mooring, or anchoring of vessels powered by engines, sails, or paddles. Additionally, such a dock may block foot passage or fishing along the shore or shellfishing in shallow, nearshore waters.

Boat travel in coastal waters is a public right established through the commerce clause of the U.S. Constitution which gives the Congress regulatory power over navigable waters—an authority that has been delegated to the U.S. Army Corps of Engineers (USACE).

Access along the shoreline is defined by the Public Trust doctrine which holds that the citizenry has certain rights of access along the shore, typically for fishing, shellfishing, and navigation. In some states, these rights include the right to walk in either the intertidal area or the dry sand area above the high-tide line. However, the definition of just which parts of the shoreline are open for access (sub-tidal, inter-tidal, or above the high tide line) and the purposes for which the access may be used varies between states.

These rights of longshore access must generally be balanced against the riparian rights of landowners adjacent to the water's edge. Riparian rights of waterfront property owners mandate that they have access to the adjacent waterbody. This does not, however, necessarily authorize a dock that extends into public waters or across lands where public trust rights exist. The Courts have found that the requirement for riparian access may be met by the establishment of a dinghy or canoe launching area—with no structure. Consequently, all docks extending into public trust areas or public waters should be reviewed for impacts to navigation and alongshore access.

Impacts to Navigation—

The typical sorts of impacts to navigation due to small docks include the following:

- *Extension into designated federal navigation projects or traditional navigation passages through the waterways.*

  This impact is particularly important in narrow river segments, at the mouths of rivers, or in shallow areas where only a narrow navigable channel exists. The issue is compounded where periodic channel realignments occur due to the shifting of sediments by storms or floodwaters.

  Federal navigation projects occur on waterways where taxpayer dollars have been invested to create or maintain a designated channel, turning basin, or anchorage.

There are instances where a proposed dock would not affect a designated navigable channel or a federal navigation project, but could adversely affect passage by paddle craft (*e.g.,* canoes and kayaks) through traditional passageways along the shore. In some situations, a dock may force small paddle craft into the dangerous situation of entering a channel utilized by larger, powered boats. For safety's sake, the smaller craft typically remain close to the shore—the same portion of the waterway where docks are generally proposed and constructed.

In some instances, the design of the dock (*e.g.,* its height over the water or structures at the water end) may impede safe navigation by obstructing views along the waterway. Structures may obscure oncoming boat traffic or boats leaving docks. They may also obscure aids to navigation.

- *Extension into a designated mooring field or anchorage area*

  Mooring fields or anchorage areas may be established and maintained by the Army Corps of Engineers (*e.g.,* designated safe harbors), state government, or municipalities. A ruling by the USACE must establish that they do not impede navigation. Mooring fields generally serve multiple boats within public waterways. Boats on moorings must be free to swing with tides, currents, and/or wind conditions. Extension of a private dock into, or near, these areas can affect the placement of moorings, safe navigation toward the moorings or anchorages, or the ability of boats to safely swing on moorings or anchors.

- *Impacts to navigation between docks*

  Private docks constructed too close to existing public or private docks or boat landings may impede safe navigation to, and use of, those existing facilities. Boats need room to maneuver around docks; the amount of room necessary is dependant on the size, configuration, and powering mechanism of the boats (*i.e.,* size of engine; sail versus engine powered, etc.) Docks that are too close together may lead to difficulties in launching or landing vessels.

Management of Impacts to Navigation—

Management of impacts to navigation may be done at the federal level (through the Army Corps of Engineers), the state level (by protecting citizens' rights in the waterway) or at the local level (through local zoning of the uplands, shoreline or waters; or through building codes).

The New England District of the Army Corps of Engineers developed a set of guidelines for the design of docks to minimize impacts to navigation. These may be viewed at the District's web site at www.nae.usace.army.mil/reg/reg2.htm. They will be used in this module to provide an example of the sorts of issues and techniques that may be used. Similar guidelines have been developed throughout the country—often implemented through General Permits developed in conjunction with state agencies. Although the numerical standards may vary between jurisdictions, examples of the types of standards found in these guidelines may include those below. In some instances, such guidelines have been incorporated into local or state regulatory programs.

Examples of such standards may include:

- *Prohibiting structures that extend into a federal navigation project, traditional or buoyed navigation channel, turning basin or designated anchorage, or a mooring field.*

  In some instances the prohibition is against intrusion into such areas, in others a specific setback distance is mandated.

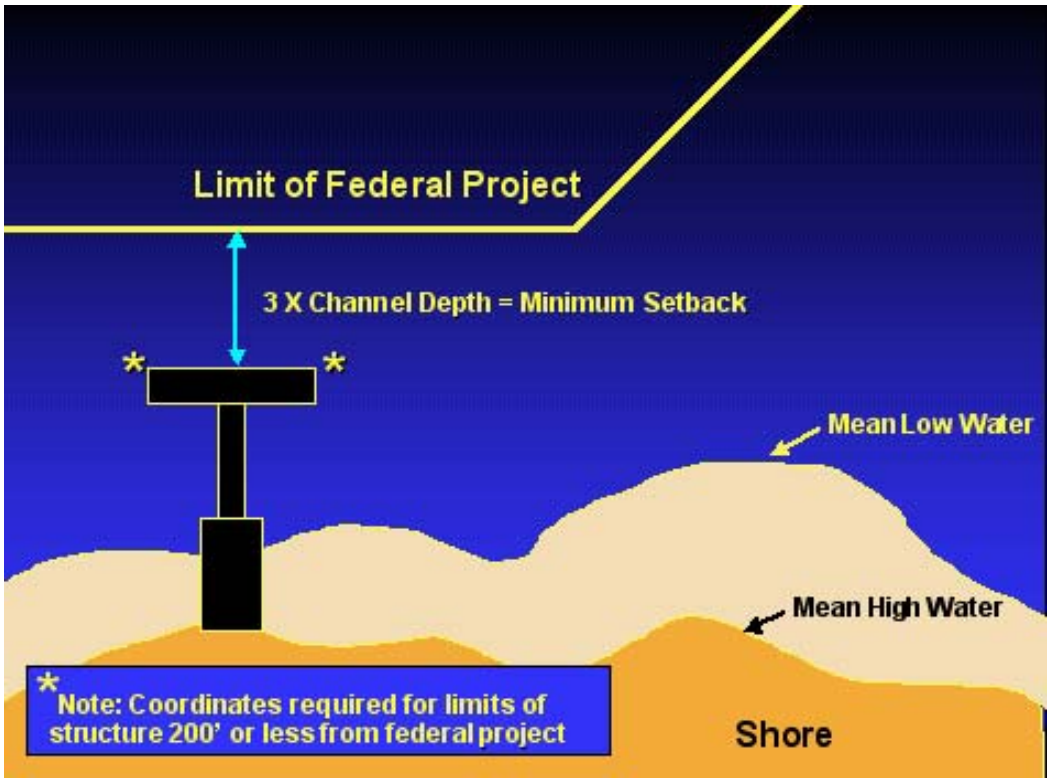

Figure 1. This graphic shows typical setbacks from federal navigation projects, mooring fields, or anchorages.

- *Limiting the length of the dock to a percentage of the width of a linear waterway.*

  Most such limits are on the order of 20–25 percent of the width of the waterway. Using these figures, even if docks are constructed on both sides of the waterway, 50–60 percent of the waterway would remain unimpeded for navigation. Lengths of docks may also be limited to a percentage of the linear frontage of a property, *e.g.,* the dock may extend no further than 50 percent (or some other figure deemed appropriate for the specific area) of the frontage. A third option is to set a maximum limit for the length of the dock.

- *Establishing a minimum distance between docks.*

  This may be done directly by setting a minimum distance between docks or by mandating a setback from riparian lines (extensions of property lines into the water). In most instances the figure used for such setbacks is on the order of 25 feet, meaning that adjacent docks could not be closer together than 50 feet. The New England District of the Corps uses the 25-foot figure, based on a median-sized recreational vessel length of approximately 32 feet. A minimum turning radius for such a vessel is 1.5 times its own length or 48 feet; which was rounded to 50 feet. The spacing between docks may be greater if the docks are designed for use by larger boats. Oftentimes, exemptions are made for single, communal docks to be utilized by adjoining properties as a means to lessen the overall number of docks constructed.

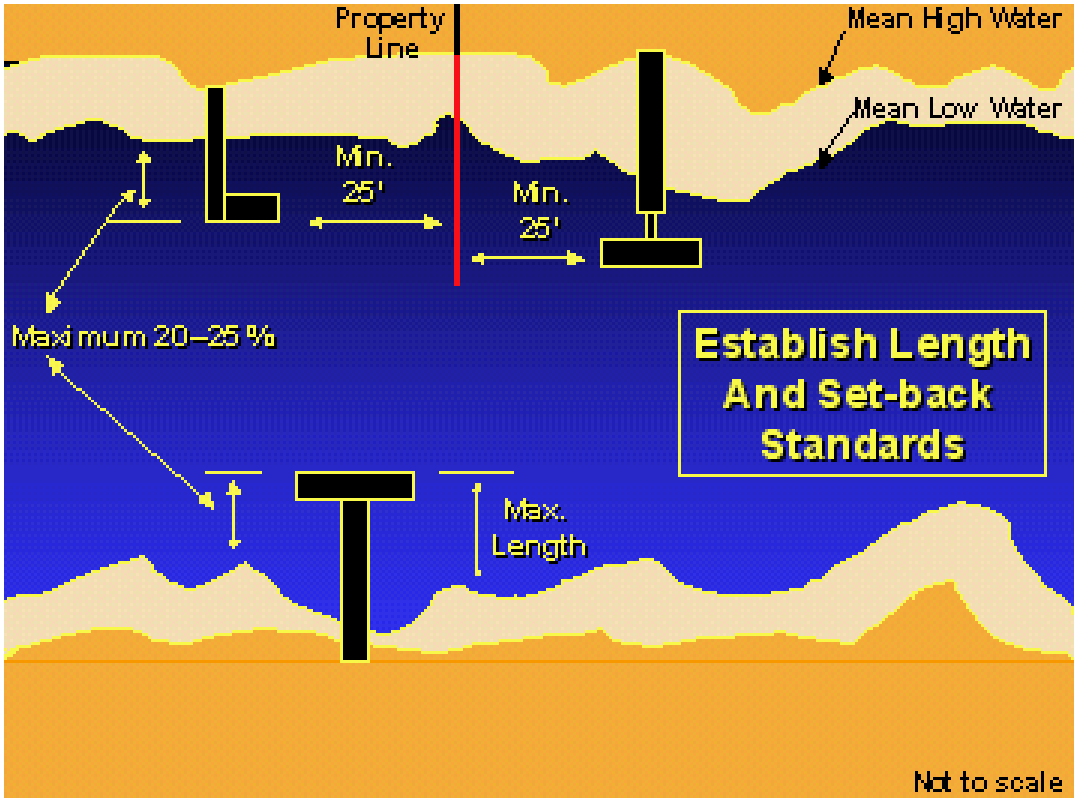

Figure 2. This graphic illustrates typical limits for dock length in linear waterways and setbacks from property lines to avoid interference in landing vessels.

- *Establishing a minimum setback from public facilities such as boat ramps or swimming areas.*
- *Limiting the design of the dock or structures at the water end of the dock in narrow or winding waterways to allow for safe lines of sight for boating traffic or aids to navigation.*

  Some jurisdictions prohibit roofed or walled structures at the ends of docks, others limit heights of the dock or spacing of pilings or cross members to ensure a clear view.
- *Preventing new docks from extending beyond the length of the existing structure (infilling).*

  For example, under the New England District of the Corps guidelines, new structures cannot surpass the length of existing docks on adjacent properties.

Impacts to Public Access—

With limited exceptions, the land below the low-tide line is public, held in trust by states for the citizens of the nation. Public rights and interests in inter-tidal areas and, in some states dry sand areas above the high tide line, are rooted in a body of law known as the public trust doctrine.

The Public Trust doctrine is based on two major principles:

1. The public has fundamental rights and interests in natural resources such as the sea, the shore, and the air; and

2. The state, as trustee of the public interest, has a duty to preserve and enhance both these natural resources and the public's right to use them.

The landward extent of public trust lands varies from state to state. In some (*e.g.,* Massachusetts and Maine) private ownership extends to the low-tide mark. In others, private ownership stops at the high-tide line. However, even in the "low-tide states," the public retains certain rights of access to the intertidal zone for specific purposes—typically fishing and navigation. In "high-tide states" the intertidal zone is typically available for strolling. In some states (*e.g.,* Oregon, North Carolina, New Jersey) these rights are even extended a discrete distance landward from the high-tide line.

This lateral access along the shore, guaranteed under the public trust doctrine, differs from "perpendicular access" to the shore, *i.e.,* the ability to get from a public street or parking lot across private land to public trust areas. Unless an accessway has been established perpendicular to the shore, the public cannot cross private land to get to the shoreline without trespassing.

The construction of docks across public trust lands and into public waters can affect the ability of people to partake of their public trust rights, including fishing, shellfishing, strolling, aquaculture sites, etc. Managers seeking to permit structures in these areas must be mindful and protective of the public's rights while balancing the interests of access to the water by adjacent private landowners.

Typical impacts of dock construction on public access rights include:

- *Obstructing the ability to walk along the waters edge, either in the water or through the intertidal zone.*

  Pilings, decking, and cross members of the dock may make it impossible for an individual to pass comfortably or safely along the shore.

- *Obstructing access to recreational or commercial shellfishing areas or designated aquaculture facilities in the water.*

  Docks extending over these areas, or a series of docks "walling them off", may preclude the public's rights to access these waters in order to harvest or grow shellfish.

Management of Impacts to Public Access—

Management of public access rights are typically done at the state level through legislation related to the protection of public trust rights. Public access may also be protected indirectly at the local level through use of the police powers (protection of public health, welfare, and safety) to define the design and construction of docks. Management techniques at the local level to maintain or increase access might include overlay zoning ordinances, wetland protection ordinances, or building codes.

Examples of standards developed through these legal techniques could include:

- Establishing a setback from existing or potential recreational or commercial shellfishing areas or areas in use for aquaculture.
- Requiring some means of comfortable passage past the dock. Options include a minimum height and opening through the dock structure to allow walking under the dock,

a set of stairs to allow walking over the landward end of the dock, or establishment of a right of way around the landward end of the dock.

- Mitigating significant impacts to public rights by negotiating perpendicular access rights of way from upland areas to the water's edge.
- Establishing rules for safe boating in nearshore areas to preclude danger to those passing along the shore on foot or while swimming.
- The development of a Special Area Management Plan to limit docks in areas of high public use for activities such as swimming, shellfishing, or paddling.

Bibliography—

New England District, US Army Corps of Engineers. 1996. *Guidelines for the placement of fixed and floating structures in navigable waters of the United States regulated by the New England District, U.S. Army Corps of Engineers.* Available at www.nae.usace.army.mil/reg/reg2.htm